

SUSTAINABLE DEVELOPMENT AND INDICATORS SYSTEMS ON NATIONAL AND INTERNATIONAL

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Abstract: Sustainable development is defined as that type of development that meets the needs of the present without compromising the opportunities of future generations to meet their own needs. This article presents a multidimensional concept of sustainable development, the emergence of sustainable development strategies and comparison of sustainable development indicators system in different countries. Over time there have been numerous concerns achievement of sustainable development indicators system. The importance of indicators and measurement data is essential for sustainable development objectives, such expression “we measure what we value and value what we measure” the Sustainable Development Commission 2001 is as relevant as possible

JEL classification: Q01, O44

Key words: critical; sustainable development, strategies, sustainable development indicators system

1. INTRODUCTION

30 years ago appeared crisis environmental issues and natural resources, which led to the concept of sustainable development. Environmental Conference in Stockholm in 1972 was the occasion that it was mentioned that human activities contribute to environmental damage, with serious consequences on the population.

The concept of sustainable development means ensuring socio-economic balance between socio-economic systems and natural potential.

In 2000, in Lisbon, it was the starting point of the European Strategy for Sustainable Development, which had three pillars: economic competitiveness, social inclusion, environmental protection.

2. EMERGENCE OF SUSTAINABLE DEVELOPMENT CONCEPT

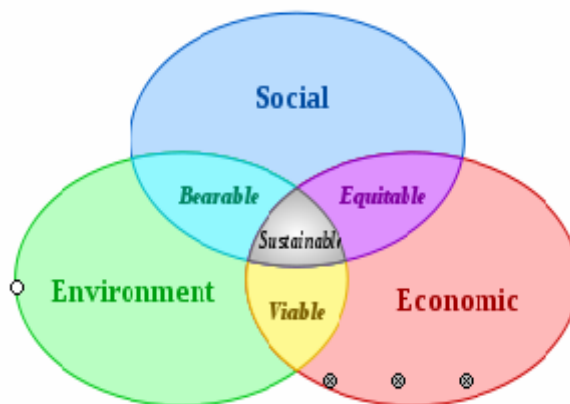
By Resolution 42/1987, UN General Assembly recommended sustainable development as a guiding principle of national strategies and policies in economic development and environmental protection.¹

In 1972, the United Nations Stockholm Conference takes place in which the 113 nations present are concerned about how human activity influences the environment. There are highlighted problems of pollution, destruction of resources, environmental damage, danger of extinction of species and the need to increase the living standard of people and

¹ Marinescu D., *Environmental law treaty*, Legal Universe Publishing, Bucharest, 2007, p.15

accept indissoluble link between quality of life and environmental quality for present and future generations.

The next step of the United Nations was the establishment of Commission on Environment and Development in 1986, in which the objective was to study the dynamics of environmental damage and provide solutions for long-term development of humanity. Under the leadership of Prime Minister of Norway at the time, Gro Harlem Brundtland, who chaired the commission and named the 1987 report, were highlighted existing problems: on the one hand, development is raising living standards of all, on the other hand, the development should not involve the destruction of natural resources or environmental pollution.



Source: www.wikipedia.ro

Figure nr. 1 Pillars of sustainable development

World Commission for Environment and Development (WCED) presented the report "Our Common Future", also known as the "Brundtland Report" the following definition of sustainable development: sustainable development is development that aims to meet the needs of the present generations without compromising the ability future to meet their own needs.²

Conference 1992, entitled Earth Summit, was organized by the United Nations in Rio de Janeiro and had a role in imposing the term „sustainable development”, considered a new development path to support human progress for the whole planet and for future time.

The conference’s objective was the establishment of a new strategy for economic development, industrial and social world, comprised under the name of sustainable development.

The mission of sustainable development is to find ways of growth and development, while the rational use of natural resources, so that renewable resources can be maintained and renewable sources to be used at a rate which takes into account the needs of future generations.³

² Gheres M., Savoiu Gh, *Environmental Economics. Treaty*, University Publishing, Bucharest, 2010, p 37

³ Sectoral Operational Programme 2007 - 2013, final version 2007, p.12

In 1996 Andrew Dobson made a classification of different typologies of sustainable development⁴:

- ✓ poor sustainable development - is mainly economics, with subordinate social and environmental component. This is a liberal approach in the sense that there is no environmental or social economic base.
- ✓ balanced sustainable development – three components are balanced
- ✓ strong sustainable development - the environment component is predominant - ecological approach: there is no human development without taking into account the ability to support the environment.

Sustainable development is a multidimensional concept aimed equally environment, natural resources, man production.

3. SYSTEM OF INDICATORS OF SUSTAINABLE DEVELOPMENT IN DIFFERENT COUNTRIES

Methodology to achieve sustainable development indicators should follow international standards.

There were many concerns achievement of sustainable development indicators system, being outlined a series of rules and principles. The most significant moments recorded in the development of systems indicators are⁵:

- ✓ Agenda 21, Chapter 40 states the objectives of the system of indicators, activities to be achieved, institutions involved
- ✓ 10 principles embodied in the driving Bellagio: examination of the overall system and component subsystems consideration of social welfare, economic and environmental, equity and disparities both within the current population and between present and future generations; indicators should respond requirements, be adaptable, to cope with constant changes
- ✓ Nations Commission for Sustainable Development (UN-CSD 1996) proposed a list of 134 indicators
- ✓ In 1997, Eurostat has conducted a pilot study sustainable Indicators of Development, which conducted a number of 46 European indicators
- ✓ United Nations proposed in 2001 a UN-CSD 2001 structured on 15 themes, 38 sub-themes, 58 indicators for the four pillars:
 - Social: equity, health, housing, security, population
 - Economic: economic structure, consumption, production
 - Environment: Earth's atmosphere, oceans, beaches and seas, rivers, biodiversity
 - Institutional: Institutional capacity, institutional framework.

In 2005, the European Sustainable Development Strategy began reviewing and completed in June 2006. The new system of indicators includes 10 themes: economic development, poverty and social exclusion, aging population, public health, climate change and energy production and consumption mode, management of natural resources, transport, good governance, global partnership.

The primary objective of the National Sustainable Development Strategy is to increase individual well-being and prosperity of all social and national economic

⁴ Lazăr M., *System of indicators of sustainable development at local level*, Corint Publishing, 2008, p.18

⁵ Lazăr M., *op.cit*, p 28

development following within the support of natural capital in a manner which ensures the quality of life of future generations.

There were concerns for the achievement of sustainable development indicators system, so each country has tried to create their own systems of indicators.

Germany has developed a system of indicators of sustainable development "The 21 Century XXI German indicators", grouped into four areas:

1. *Future generations*: the productivity of energy and raw materials, emission of greenhouse gas effect is the Kyoto protocol, heightened energy consumption share of non-conventional energy, increased urbanization and transport areas intended; evaluating stocking of certain species of animals, public financial balance, the rate investment, public spending / private research, youth education diploma 25 years and the number of students enrolled.

2. *Economic Prosperity*: GDP, transport intensity, share of organic farming, air pollution, health, number of thefts by burglary at home.

3. *Social cohesion*: the rate of active population, making the offer childcare during the day, the ratio between the annual remuneration of men and women, the number of young foreigners who leave school without certificates for first cycle studies.

4. *International Responsibility*: cooperation and development expenditures, EU imports from developing countries.

France has developed a system of indicators focused on five themes and 10 modules, comprising 44 indicators⁶:

- ✓ Theme 1 Sustainable growth
 - Modules: Providing an increase in eco-efficient Production structure in respect to environmental condition
- ✓ Theme 2 Heritage and critical resources
 - Modules: Sustainable use of resources Maintenance and transmission of patrimony
- ✓ Theme 3 Dimensions of space and global perspectives
 - Modules: Distribution and spatial inequalities French relations with the world
- ✓ Theme 4 Meeting the needs of present
 - Module: Inequalities and exclusion Behaviors of dissatisfaction
- ✓ Theme 5 Prospect and future generations
 - Module: Principles of accountability Vulnerability and adaptation to unpredictable

In the **United Kingdom** selection process indicators began in 1996 and ended in 2001. The system of indicators includes 147 indicators divided into three main themes: economic, social, environmental

Economic indicators: economic production, investment, labor market

Social indicators: poverty and social exclusion, education, health, housing

Environmental indicators: Changing the climate, air quality, road traffic, river water quality, biodiversity, land use, waste.

In **Switzerland**, the basic criterion for selection is that each of them must allow assessment of progress or regression to the past⁷. The system is divided into 26 chapters:

⁶ Lazăr M., *op.cit.*, p 37

social security and material wealth, health, subjective conditions of life, housing, culture, social cohesion and participation, cooperation in development, education and science, information, physical security, competitiveness and international trade, trade inside, work, technology and research - development, production, consumption, mobility, substances, wastes and effects, soil, water, air, climate, land use, biodiversity, energy, forests.

Finland has adopted the government's sustainable development focused on seven topics: the concept of sustainable development, role of Finland in international cooperation; Products, production and consumption, Energy and the economy, regional, urban and transport, rural areas and use of resources, research and teaching

The Commission for Sustainable Development, together with the Ministry of Environment, Agriculture, Ministry of Transport and Telecommunications, Ministry of Education, have developed a system of indicators, resulting a classification of the 3 areas and 20 positions:

I. Environmental Issues: Great changes of climate, Ozone depletion, Acidification, Eutrophic, Biodiversity, Toxic contamination

II. Economic issues: Economic development, Environmental policy instruments Natural resources, Community structure and transport, Production and Consumption

III. Social and Cultural Issues: Demographic development, Lifestyle and disease, Work, Inequalities and social problems, Education, research, participation, Access to information, Cultural heritage, Ethnic minorities, Development cooperation.

Denmark adopted its first sustainable development strategy in June 2002 aimed at increasing employment, high standard of living, clean environment. The indicator system is focused on three dimensions: economic, environmental, sociological factors.

- ✓ economic development and employment
- ✓ poverty
- ✓ aging population
- ✓ health
- ✓ climate change and energy
- ✓ sustainable production and consumption patterns
- ✓ protection of natural resources
- ✓ transport and land use
- ✓ public management
- ✓ global solidarity

In the PHARE 2001, National Institute of Statistics of **Romania** included a pilot study for developing a system of sustainable development indicators. The construction of indicators has been considered a model adopted by Eurostat and the European Environment Agency respectively DPSIR model (Driving forces, Pressures, State, Impacts, Responses). The list of indicators includes: - Structural indicators with reference to the environment, for which Romania has mandatory reporting to international bodies; - Indicators that monitor the achievement of the MDGs; - Indicators that monitor the objectives contained in the Development Strategy of Romania "Horizon 2025".

In Romania, the indicator system is structured according to the 13 objectives of the National Strategy for Sustainable Development, totaling 103 indicators:

- ✓ Objective 1: Structural change and macroeconomic equilibrium
- ✓ Objective 2 Climate change and clean energy

⁷ Lazăr M., *op.cit.*, p 40

- ✓ Objective 3 Sustainable Transport
- ✓ Objective 4 Production and sustainable consumption
- ✓ Objective 5 Conservation of natural resources
- ✓ Objective 6 Public Health
- ✓ Objective 7 Social inclusion, demography and migration
- ✓ Objective 8 Global poverty and sustainable development challenges
- ✓ Objective 9 Education and Training
- ✓ Objective 10 Scientific Research and Development
- ✓ Objective 11 Increase productivity and improve the employment rate
- ✓ Objective 12 Investment policy
- ✓ Objective 13 Administrative capacity and quality of public services

4. CONCLUSIONS

Sustainable development indicators should be harmonized in terms of methodology with international standards, comparable to those developed by Member States. The importance of indicators and measurement data is essential for sustainable development objectives.

The setting of the system indicators have started from one of the Rio Declaration which established sustainable development priority in human beings with the right to a healthy and productive life in harmony with nature, by providing a less polluted environment, increasing job employment, GDP growth per capita and better living conditions, discussing all the pillars of sustainable development: economic, social, environment.

REFERENCES

1. Gheres M., Savoiu Gh. Environmental Economics. Treaty, University Publishing, Bucharest, 2010
2. Lazăr M. System of indicators of sustainable development at local level, Corint Publishing, 2008
3. Marinescu D., Environmental law treaty, Legal Universe Publishing, Bucharest, 2007
4. * * * Sectoral Operational Programme 2007 - 2013, final version 2007
5. * * * http://www.mmediu.ro/vechi/dezvoltare_durabila/istoric.htm
6. * * * http://www.insse.ro/cms/files/Web_IDD_BD/index.htm
7. * * * <http://www.wikipedia.ro>